

AMENDMENTS TO THE CLAIMS:

The claims have not been amended and read as follows:

1. (Previously Presented) An optical device comprising:

a dividing unit that divides an image sensed by an image sensor into a plurality of areas;

a grouping unit that generates a focus map and groups the divided areas of the sensed image into object areas based on the generated focus map;

a main object area determination unit that determines a main object area out of the object areas grouped by said grouping unit;

a focus controller that focuses on the determined main object area using information of the focus map;

a main object area changing unit that (a) determines whether or not an operation for changing the main object area has been performed by a user using an operation member during a period after said focus controller has focused on the determined main object area and before the image sensed by the image sensor has been captured and wherein a focus condition set by said focus controller on the determined main object area is maintained during this period until it has been determined that the operation member has been operated to set as a new main object area one of the object areas and (b) then causes said focus controller to focus on the new main object area using information of the focus map.

2. (Previously Presented) The optical device according to claim 1, wherein said main object area changing unit has a direction designation unit that designates a direction

which is perpendicular to an optical axis of the optical device, and said main object area changing unit determines an area next to the main object area in the direction designated by said direction designation unit as the new main object area.

3. (Previously Presented) The optical device according to claim 2, wherein said direction designation unit comprises a rotary operation member capable of rotating at least in two directions.

4. (Previously Presented) The optical device according to claim 3, wherein said direction designation unit is configured with a plurality of said rotary operation members.

5. (Previously Presented) The optical device according to claim 2, wherein said direction designation unit comprises a slide-type designation member capable of designating at least two directions.

6. (Previously Presented) The optical device according to claim 5, wherein said direction designation unit is configured with a plurality of said slide-type designation members.

7. (Previously Presented) The optical device according to claim 2, wherein said direction designation unit is a track ball.

8. (Previously Presented) The optical device according to claim 2, wherein said direction designation member is operated manually.

9. (Previously Presented) The optical device according to claim 1, wherein said grouping unit groups the divided areas in the sensed image on the basis of distances to objects included in the sensed image, and said main object area changing unit has a direction designation unit that designates a direction along an optical axis of the optical device, and said main object area changing unit determines an area including an object a distance to which is next shorter or longer than a distance to an object included in the main object area as the new main object area depending upon the direction designated by said direction designation unit.

10. (Previously Presented) The optical device according to claim 9, wherein said direction designation unit is a focusing member of an image sensing optical system.

11. (Previously Presented) The optical device according to claim 10, wherein said direction designation member is operated manually.

12. (Previously Presented) The optical device according to claim 1, further comprising an evaluation unit that calculates an evaluation value by performing a predetermined operation for each of the object areas grouped by said grouping unit, wherein said main object area determination unit determines the main object area on the basis of the evaluation value calculated for each of the object areas by said evaluation unit.

13. (Previously Presented) The optical device according to claim 1, wherein said main object area determination unit automatically determines the main object area.

14. (Previously Presented) The optical device according to claim 1, further comprising a priority order determination unit that determines a priority order, wherein when a change in main object area is requested, said main object area changing unit changes the main object area in the descending order of the priority order.

15. (Previously Presented) The optical device according to claim 14, further comprising an evaluation unit that calculates an evaluation value by performing a predetermined operation for each of the object areas grouped by said grouping unit, wherein said priority order determination unit determines the priority order on the basis of the evaluation value calculated for each of the object areas by said evaluation.

16. (Previously Presented) A distance measuring point selection method comprising:

- a dividing step of dividing a sensed image into a plurality of areas;
- a grouping step of generating a focus map and grouping the divided areas of the sensed image into object areas based on the generated focus map;
- a main object area determination step of determining a main object area out of the object areas grouped in said grouping step;

a first focus control step of focusing on the main object area determined in said main object area determination step using information of the focus map;

a change instruction detection step of detecting whether or not an operation for changing the main object area has been performed by a user using an operation member during a period after said first focus control step of focusing on the determined main object area and before the image sensed by the image sensor has been captured and wherein a focus condition on the determined main object area is maintained during this period until it has been determined that the operation member has been operated;

a main object area changing step of determining as a new main object area one of the object areas in accordance with the operation by the operation member when it is detected that the operation member is operated; and

a second focus control step of changing to focus on the new main object area using information of the focus map when the main object area is changed in said main object area changing step.

17. (Previously Presented) The distance measuring point selection method according to claim 16, wherein, in said main object area changing step, an area next to the main object area in a direction designated from outside is selected as the new main object area.

18. (Original) The distance measuring point selection method according to claim 17, wherein the direction designated from outside is selected from at least two directions.

19. (Original) The distance measuring point selection method according to claim 18, wherein the direction designated from outside is perpendicular to an optical axis.

20. (Previously Presented) The distance measuring point selection method according to claim 16, wherein, in said grouping step, the divided areas in the sensed image are grouped on the basis of distances to objects included in the sensed image, and, in said main object area changing step, an area including an object a distance to which is next shorter or longer than a distance to an object included in the main object area is selected as the new main object area depending upon a direction designated from outside.

21. (Original) The distance measuring point selection method according to claim 20, wherein the direction designated from outside is an optical direction.

22. (Previously Presented) The distance measuring point selection method according to claim 16, further comprising an evaluation step of calculating an evaluation value by performing a predetermined operation for each of the object areas grouped in said grouping step, wherein, in said main object area determination step, the main object area is determined on the basis of the evaluation value calculated for each of the object areas in said evaluation step.

23. (Original) The distance measuring point selection method according to claim 16, wherein, in said main object area determination step, the main object area is automatically determined.

24. (Previously Presented) The distance measuring point selection method according to claim 16, wherein the instruction to change the main object area detected in said change instruction detection step is designated manually.

25. (Previously Presented) The distance measuring point selection method according to claim 16, further comprising a priority order determination step of determining a priority order, wherein when a change in main object area is requested, in said main object area changing step, the main object area is changed in the descending order of the priority order.

26. (Previously Presented) The distance measuring point selection method according to claim 25, further comprising an evaluation step of calculating an evaluation value by performing a predetermined operation for each of the object areas grouped in said grouping step, wherein in said priority order determination step, the priority order is determined on the basis of the evaluation value calculated for each of the object areas in said evaluation step.

27. (Previously Presented) An optical device comprising:
a grouping unit that (a) generates a focus map of a scene by determining for each of a plurality of predetermined unit areas of the scene a value which represents a distance to a content included in each predetermined unit area based on phase difference between a pair of images of the scene sensed by an image sensor, and (b) groups the predetermined unit areas of the scene into object areas based on the generated focus map;

a main object area determination unit that determines a main object area out of the object areas grouped by said grouping unit;

a focus controller that focuses on the determined main object area using information of the focus map;

a main object area changing unit that (a) determines whether or not an operation for changing the main object area has been performed by a user of an operation member during a period after said focus controller has focused on the determined main object area and before the image sensed by the image sensor has been captured and wherein a focus condition set by the focus controller on the determined main object area is maintained during this period until it has been determined that the operation member has been operated to set as a new main object area one of the object areas and (b) then causes said focus controller to focus on the new main object area using information of the focus map.

28. (Previously Presented) A distance measuring point selection method comprising:

a grouping step of (a) generating a focus map of a scene by determining for each of a plurality of predetermined unit areas of the scene a value which represents a distance to a content included in each predetermined unit area based on phase difference between a pair of images of the scene sensed by an image sensor, and (b) grouping the predetermined unit areas of the scene into object areas based on the generated focus map;

a main object area determination step of determining a main object area out of the object areas grouped in said grouping step;

a first focus control step of focusing on the main object area determined in said main object area determination step using information of the focus map;

a change instruction detection step of detecting whether or not an operation for changing the main object area has been performed by a user of an operation member during a period after said first focus control step of focusing on the determined main object area and before the image sensed by the image sensor has been captured and wherein a focus condition on the determined main object area is maintained during this period until it has been determined that the operation member has been operated;

a main object area changing step of determining as a new main object area one of the object areas in accordance with the operation by the operation member when it is detected that the operation member is operated; and

a second focus control step of changing to focus on the new main object area when the main object area is changed in said main object area changing step using information of the focus map.